REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No NM0030872

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

East Mesa Water Reclamation Facility
Las Cruces Utilities, City of Las Cruces
P.O. Box 20000
Las Cruces, NM 88004

is authorized to discharge from a facility located at 5150 E. Lohman Avenue, City of Las Cruces, Dona Ana County, New Mexico. The discharge from this location will be to receiving waters named Southfork of the Las Cruces Arroyo, thence to the Alameda Arroyo, thence to the Las Cruces Lateral, thence to the Rio Grande. The discharge from this location will be to receiving waters named the Rio Grande, Waterbody Segment Code No. 20.6.4.101 of the Rio Grande Basin.

The discharge is located on that water at the following coordinates:

Outfall 001: Latitude 32° 19' 40" North, Longitude 106° 43' 26" West

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II, Part III, and Part IV hereof.

This permit is a new, never before, issued permit.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Issued on

Miguel I. Flores
Director
Water Quality Protection Division (6WQ)

Prepared by

Scott W. Stine, Ph.D.
Environmental Scientist
Permits & Technical Section (6WQ-PP)

SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS.

Final Effluent limits – 1.0 mgd design flow.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge treated sanitary wastewater from outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS Standard Units		MONITORING REQUIREMENTS	
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.6	9.0	Once/Week	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS lbs/day, unless noted		DISCHARGE LIMITATIONS mg/l, unless noted			MONITORING REQUIREMENTS	
POLLUTANT	STORET CODE	30-DAY AVG	7-DAY AVG	30-DAY AVG	7-DAY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	50050	Report MGD	Report MGD	***	***	***	Daily	Instantaneous
Biochemical Oxygen Demand, 5-day	00310	125.1	187.6	30	45	N/A	Once/Week (*2)	Grab
Total Suspended Solids	00530	125.1	187.6	30	45	N/A	Once/Week (*2)	Grab
E. coli Bacteria	51040	N/A	N/A	126 (*1)	N/A	410 (*1)	Once/Week (*2)	Grab
Total Residual Chlorine	50060	N/A	N/A	Report	N/A	11 ug/l (*3)	Daily	Instantaneous Grab (*3)
Antimony (*4)	01097	N/A	N/A	Report	N/A	Report	Once	Grab
Nickel (*4)	01065	N/A	N/A	Report	N/A	Report	Once	Grab
Thallium (*4)	01059	N/A	N/A	Report	N/A	Report	Once	Grab
Arsenic (*4)	01000	N/A	N/A	Report	N/A	Report	Once	Grab
Selenium (*4)	01145	N/A	N/A	Report	N/A	Report	Once	Grab
Zinc (*4)	01080	N/A	N/A	Report	N/A	Report	Once	Grab
Aldrin (*4)	39330	N/A	N/A	Report	N/A	Report	Once	Grab
Chlordane (*4)	39350	N/A	N/A	Report	N/A	Report	Once	Grab
Dieldrin (*4)	39380	N/A	N/A	Report	N/A	Report	Once	Grab
Hexachlorobenzene (*4)	39700	N/A	N/A	Report	N/A	Report	Once	Grab
Tetrachloroethylene (*4)	34475	N/A	N/A	Report	N/A	Report	Once	Grab
Benzo(a)pyrene (*4)	34247	N/A	N/A	Report	N/A	Report	Once	Grab
4,4'-DDT and derivatives (*4)	39300	N/A	N/A	Report	N/A	Report	Once	Grab

2,3,7,8-TCDD (*4)	34675	N/A	N/A	Report	N/A	Report	Once	Grab
PCBs (*4)	39516	N/A	N/A	Report	N/A	Report	Once	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY TESTING (48-Hour Static Renewal)	30-DAY AVG MINIMUM	48-HR MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Daphnia pulex	Report	Report	Once/Quarter (*5, 6)	24-Hr Composite

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Sampling Location

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit.

Footnotes

*1 Colony forming units (cfu) per 100 ml.

*2 For any reporting period, samples shall be taken at least ten (10) days from the first sample of the previous reporting period.

*3 The maximum TRC shall be monitored by instantaneous grab sample once per day only when using chlorine for either bacteria control in the effluent or when chlorine is being used in any of the wastewater treatment systems for cleaning and/or filamentous bacteria control in the settling basins. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. (See Part II, Section A).

*4 The permittee shall sample for these parameters within 90 days of the first discharge from the facility. The permit may be reopened to establish effluent limitations for those parameters that have reasonable potential to exceed the New Mexico Human Health Standards.

*5 Once per quarter. If the four (4) quarterly tests occurring during the first full year of testing pass, then the monitoring frequency for *Daphnia pulex* may be reduced to once/six-months. See Part II of the Permit for monitoring frequency reduction. If any test failures occur subsequent to monitoring frequency reduction, the frequency shall return to once/quarter for the remainder of the permit. The frequency shall revert to once/quarter on the last day of the permit. If any test demonstrates significant toxic effects at 100% critical dilution, testing for the affected species will continue at once/quarter until the expiration date of the permit. Additionally, for this failure, TRE requirements, as defined in Part II, Section E, Whole Effluent Toxicity Testing Requirements, will be conducted. At the expiration date of this permit, until a renewal permit is issued, biomonitoring frequency monitoring reverts to once per quarter until the permit is re-issued. See Part II, Section E of this permit.

*6 This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of a test failure. However, upon failure of any WET test, the permittee must report the test results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification of the test failure. EPA and NMED will review and determine the appropriate action necessary, if any. (See Part II, Section E).

SECTION B. COMPLIANCE SCHEDULES.

None.

SECTION C. MONITORING AND REPORTING (MINOR DISCHARGERS).

Monitoring information shall be on Discharge Monitoring Report Form(s) EPA 3320-1 as specified in Part III.D.4 of this permit and shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.

1. Reporting periods shall end on the last day of the months March, June, September, and December.

2. The permittee is required to submit regular quarterly reports as described above postmarked no later than the 28th day of the month following each reporting period.

3. If any 7-day average or daily maximum value exceeds the effluent limitations specified in Part I.A, the permittee shall report the excursion in accordance with the requirements of Part III.D.

4. Any 30-day average, 7-day average, or daily maximum value reported in the required Discharge Monitoring Report which is in excess of the effluent limitation specified in Part I.A shall constitute evidence of violation of such effluent limitation and of this permit.

5. Other measurements of oxygen demand (e.g., TOC and COD) may be substituted for five-day Biochemical Oxygen Demand (BOD5) or for five-day Carbonaceous Biochemical Oxygen Demand (CBOD5), as applicable, where the permittee can demonstrate long-term correlation of the method with BOD5 or CBOD5 values, as applicable. Details of the correlation procedures used must be submitted and prior approval granted by the permitting authority for this procedure to be acceptable. Data reported must also include evidence to show that the proper correlation continues to exist after approval.

6. NO DISCHARGE REPORTING
   If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the preprinted Discharge Monitoring Report.

SECTION D. OVERFLOW REPORTING.

The permittee shall report all overflows with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary).

Overflows that endanger health or the environment shall be orally reported at (214) 665-6595, and NMED Surface Water Quality Bureau at (505) 827-0187, within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows that endanger health or the environment shall be provided to EPA and the NMED Surface Water Quality Bureau within 5 days of the time the permittee becomes aware of the circumstance.

SECTION E. POLLUTION PREVENTION REQUIREMENTS.

1. The permittee shall institute a program within 12 months of the effective date of the permit (or continue an existing one) directed towards optimizing the efficiency and extending the useful life of the facility. The permittee shall consider the following items in the program:

    a. The influent loadings, flow and design capacity;
    b. The effluent quality and plant performance;
    c. The age and expected life of the wastewater treatment facility's equipment;
    d. Bypasses and overflows of the tributary sewerage system and treatment works;
    e. New developments at the facility;
    f. Operator certification and training plans and status;
    g. The financial status of the facility;
    h. Preventative maintenance programs and equipment conditions and;
    i. An overall evaluation of conditions at the facility.

PART II - OTHER CONDITIONS

A. MINIMUM QUANTIFICATION LEVEL (MQL)

If any individual analytical test result is less than the minimum quantification level list below, a value of zero (0) may be used for that individual result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

Pollutant	MQL
Total Residual Chlorine	100 ug/l

B. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, and concurrently to NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

TRC
E. coli bacteria

C. PERMIT MODIFICATION AND REOPENER

In accordance with 40 CFR122.44(d), the permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, new or revised TMDL's or new State water quality standards are established and/or remanded by the New Mexico Water Quality Control Commission.

In accordance with 40 CFR Part 122.62 (s) (2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

D. CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

a. The permittee shall operate an industrial pretreatment program in accordance with Section 402(b)(8) of the Clean Water Act, the General Pretreatment Regulations (40 CFR Part 403) and the approved POTW pretreatment program submitted by the permittee. The pretreatment

program was approved on January 25, 1984 and modified on January 17, 1992 and on December 29, 2000. The POTW pretreatment program is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

(1) Industrial user information shall be updated at a frequency adequate to ensure that all IUs are properly characterized at all times;

(2) The frequency and nature of industrial user compliance monitoring activities by the permittee shall be commensurate with the character, consistency and volume of waste. The permittee must inspect and sample the effluent from each Significant Industrial User in accordance with 40 CFR 403.8(f)(2)(v). This is in addition to any industrial self-monitoring activities;

(3) The permittee shall enforce and obtain remedies for noncompliance by any industrial users with applicable pretreatment standards and requirements;

(4) The permittee shall control through permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of Industrial Users identified as significant under 40 CFR 403.3(v), this control shall be achieved through individual or general control mechanisms, in accordance with 40 CFR 403.8(f)(1)(iii). Both individual and general control mechanisms must be enforceable and contain, at a minimum, the following conditions:

(i) Statement of duration (in no case more than five years);
(ii) Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;
(iii) Effluent limits, including Best Management Practices, based on applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and State and local law;
(iv) Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including an identification of the pollutants to be monitored (including the process for seeking a waiver for a pollutant neither present nor expected to be present in the Discharge on accordance with § 403.12(e)(2), or a specific waiver for a pollutant in the case of an individual control mechanism), sampling location, sampling frequency, and sample type, based on the applicable general Pretreatment Standards in 40 CFR

403, categorical Pretreatment Standards, local limits, and State and local law;

(v) Statement of applicable civil and criminal penalties for violation of Pretreatment Standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond federal deadlines; and

(vi) Requirements to control slug discharges, if determined by the POTW to be necessary.

(5) The permittee shall evaluate whether each Significant Industrial User needs a plan or other action to control slug discharges, in accordance with 40 CFR 403.8(f)(2)(vi);

(6) The permittee shall provide adequate staff, equipment, and support capabilities to carry out all elements of the pretreatment program; and,

(7) The approved program shall not be modified by the permittee without the prior approval of the EPA.

b. The permittee shall establish and enforce specific limits to implement the provisions of 40 CFR Parts 403.5(a) and (b), as required by 40 CFR Part 403.5(c). POTWs may develop Best Management Practices (BMPs) to implement paragraphs 40 CFR 403.5 (c)(1) and (c)(2). Such BMPs shall be considered local limits and Pretreatment Standards. Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits.

All specific prohibitions or limits developed under this requirement are deemed to be conditions of this permit. The specific prohibitions set out in 40 CFR Part 403.5(b) shall be enforced by the permittee unless modified under this provision.

c. The permittee shall analyze the treatment facility influent and effluent for the presence of the toxic pollutants listed in 40 CFR 122 Appendix D (NPDES Application Testing Requirements) Table II at least once/12 months and the toxic pollutants in Table III at least once/6 months. If, based upon information available to the permittee, there is reason to suspect the presence of any toxic or hazardous pollutant listed in Table V, or any other pollutant, known or suspected to adversely affect treatment plant operation, receiving water quality, or solids disposal procedures, analysis for those pollutants shall be performed at least once/6 months on both the influent and the effluent.

The influent and effluent samples collected shall be composite samples consisting of at least 12 aliquots collected at approximately equal intervals over a representative 24 hour period and composited according to flow. Sampling and analytical procedures shall be in accordance with guidelines established in 40 CFR 136. The effluent samples shall be analyzed to a level at least as low as required in (f) below. Where composite samples are inappropriate, due to sampling, holding time, or analytical constraints, at least 4 grab samples, taken at equal intervals over a representative 24 hour period, shall be taken.

d. The permittee shall prepare annually a list of Industrial Users which during the preceding twelve months were in significant noncompliance with applicable pretreatment requirements. For the purposes of this Part, significant noncompliance shall be determined based upon the more stringent of either criteria established at 40 CFR Part 403.8(f)(2)(viii) [rev. 10/14/05] or criteria established in the approved POTW pretreatment program. This list is to be published annually in a newspaper of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW during the month of February.

In addition, during the month of February the permittee shall submit an updated pretreatment program status report to EPA and the State containing the following information:

(1) An updated list of all significant industrial users. The list must also identify Industrial Users subject to categorical Pretreatment Standards that are subject to reduced reporting requirements under 40 CFR 403.12(e)(3), and identify which Industrial Users are Non-Significant Categorical Industrial Users. For each industrial user listed the following information shall be included:

(i) Standard Industrial Classification (SIC) or NAISC code and categorical determination;

(ii) Control document status. Whether the user has an effective control document, and the date such document was last issued, reissued, or modified, (indicate which industrial users were added to the system (or newly identified) within the previous 12 months);

(iii) A summary of all monitoring activities performed within the previous 12 months. The following information shall be reported:

* total number of inspections performed;
* total number of sampling visits made;

(iv) Status of compliance with both effluent limitations and reporting requirements. Compliance status shall be defined as follows:

* Compliant (C) - no violations during the previous 12 month period;

* Non-compliant (NC) - one or more violations during the previous 12 months but does not meet the criteria for significantly noncompliant industrial users;

* Significant Noncompliance (SNC) - in accordance with requirements described in d. above; and

(v) For significantly noncompliant industrial users, indicate the nature of the violations, the type and number of actions taken (notice of violation, administrative order, criminal or civil suit, fines or penalties collected, etc.) and current compliance status. If ANY industrial user was on a schedule to attain compliance with effluent limits, indicate the date the schedule was issued and the date compliance is to be attained;

(2) A list of all significant industrial users whose authorization to discharge was terminated or revoked during the preceding 12 month period and the reason for termination;

(3) A report on any interference, pass through, upset or POTW permit violations known or suspected to be caused by industrial contributors and actions taken by the permittee in response;

(4) The results of all influent and effluent analyses performed pursuant to Part II(D)(c) above;

(5) A copy of the newspaper publication of the significantly noncompliant industrial users giving the name of the newspaper and the date published; and

(6) The monthly average water quality based effluent concentration necessary to meet the state water quality standards as developed in the approved technically based local limits.

e. The permittee shall provide adequate notice of the following:

(1) Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act if it were directly discharging those pollutants; and

(2) Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Adequate notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

f. All effluent monitoring conducted in accordance with Part (II)(D)(c) above shall meet the Minimum Quantification Levels (MQLs) shown in the table below;

MINIMUM QUANTIFICATION LEVELS (MQLs)

METALS AND CYANIDE	REQUIRED MQL (µg/L)	EPA METHOD
Antimony (Total)[1]	60	200.7
Arsenic (Total)[1]	10	206.2
Beryllium (Total)[1]	5	200.7
Cadmium (Total)[2]	1	213.2
Chromium (Total)[1]	10	200.7
Chromium (3+)[1]	10	200.7
Chromium (6+)[1]	10	200.7
Copper (Total)[2]	10	220.2
Lead (Total)[2]	5	239.2
Mercury (Total)[1]	.2	245.1
Molybdenum (Total)[9]	30	200.7
Nickel (Total)[1] [Freshwater]	40	200.7
Nickel (Total)[2] [Marine]	5	249.2
Selenium (Total)[1]	5	270.2
Silver (Total)[2]	2	272.2
Thallium (Total)[1]	10	279.2
Zinc (Total[1]	20	200.7
Cyanide (Total)[1]	20	335.3
DIOXIN		
2,3,7,8-Tetrachloro-dibenzo-p-dioxin (TCDD)[3]	.00001	1613
VOLATILE COMPOUNDS		
Acrolein[4]	50	624
Acrylonitrile[4]	50	624
Benzene[4]	10	624
Bromoform[5]	10	624
Carbon Tetrachloride[5]	10	624
Chlorobenzene[5]	10	624
Chlorodibromomethane[5]	10	624
Chloroethane[6]	50	624
2-Chloroethyl vinyl ether[4]	10	624
Chloroform[5]	10	624
Dichlorobromomethane[5]	10	624
1,1-Dichloroethane[5]	10	624
1,2-Dichloroethane[5]	10	624
1,1-Dichloroethylene[5]	10	624
1,2-Dichloropropane[5]	10	624
1,3-Dichloropropylene[5]	10	624
Ethylbenzene[5]	10	624
Methyl Bromide [Bromomethane][6]	50	624
Methyl Chloride [Chloromethane][6]	50	624
Methylene Chloride[5]	20	624

VOLATILE COMPOUNDS	REQUIRED MQL (µg/L)	EPA METHOD
1,1,2,2-Tetrachloroethane[5]	10	624
Tetrachloroethylene[5]	10	624
Toluene[5]	10	624
1,2-trans-Dichloroethylene[5]	10	624
1,1,1-Trichloroethane[5]	10	624
1,1,2-Trichloroethane[5]	10	624
Trichloroethylene[5]	10	624
Vinyl Chloride[5]	10	624
ACID COMPOUNDS		
2-Chlorophenol[5]	10	625
2,4-Dichlorophenol[5]	10	625
2,4-Dimethylphenol[7]	10	625
4,6-Dinitro-o-Cresol [2 methyl 4,6-dinitrophenol[8]	50	625
2,4-Dinitrophenol[5]	50	625
2-Nitrophenol[6]	20	625
4-Nitrophenol[5]	50	625
p-Chloro-m-Cresol [4 chloro-3-methylphenol][5]	10	625
Pentachlorophenol[5]	50	625
Phenol[5]	10	625
2,4,6-Trichlorophenol[5]	10	625
BASE/NEUTRAL COMPOUNDS		
Acenaphthene[5]	10	625
Acenaphthylene[5]	10	625
Anthracene[5]	10	625
Benzidine[4]	50	625
Benzo(a)anthracene[5]	10	625
Benzo(a)pyrene[5]	10	625
3,4-Benzofluoranthene[5]	10	625
Benzo(ghi)perylene[6]	20	625
Benzo(k)fluoranthene[5]	10	625
Bis(2-chloroethoxy) methane[5]	10	625
Bis(2-chloroethyl) ether[5]	10	625
Bis(2-chloroisopropyl) ether[5]	10	625
Bis(2-ethylhexyl) phthalate[5]	10	625
4-Bromophenyl phenyl ether[5]	10	625
Butyl benzyl phthalate[5]	10	625
2-Chloronapthalene[5]	10	625
4-Chlorophenyl phenyl ether[5]	10	625
Chrysene[5]	10	625

BASE/NEUTRAL COMPOUNDS	(µg/L)	EPA METHOD
Dibenzo (a,h) anthracene[6]	20	625
1,2-Dichlorobenzene[5]	10	625
1,3-Dichlorobenzene[5]	10	625
1,4-Dichlorobenzene[5]	10	625
3,3'-Dichlorobenzidine[6]	50	625
Diethyl Phthalate[5]	10	625
Dimethyl Phthalate[5]	10	625
Di-n-Butyl Phthalate[5]	10	625
2,4-Dinitrotoluene[5]	10	625
2,6-Dinitrotoluene[5]	10	625
Di-n-octyl Phthalate[5]	10	625
1,2-Diphenylhydrazine[4]	20	625
Fluoranthene[5]	10	625
Fluorene[5]	10	625
Hexachlorobenzene[5]	10	625
Hexachlorobutadiene[5]	10	625
Hexachlorocyclopentadiene[5]	10	625
Hexachloroethane[6]	20	625
Indeno (1,2,3-cd) pyrene[6] (2,3-o-phenylene pyrene)	20	625
Isophorone[5]	10	625
Naphthalene[5]	10	625
Nitrobenzene[5]	10	625
N-nitrosodimethylamine[6]	50	625
N-nitrosodi-n-propylamine[6]	20	625
N-nitrosodiphenylamine[6]	20	625
Phenanthrene[5]	10	625
Pyrene[5]	10	625
1,2,4-Trichlorobenzene[5]	10	625
PESTICIDES		
Aldrin[7]	.05	608
Alpha-BHC[7]	.05	608
Beta-BHC[7]	.05	608
Gamma-BHC (Lindane)[7]	.05	608
Delta-BHC[7]	.05	608
Chlordane[7] .2		608
4,4'-DDT[7]	.1	608
4,4'-DDE (p,p-DDX)[7]	.1	608
4,4'-DDD (p,p-TDE)[7]	.1	608
Dieldrin[7] .1		608
Alpha-endosulfan[7]	.1	608
Beta-endosulfan[7]	.1	608
Endosulfan sulfate[7]	.1	608

PESTICIDES	(µg/L)	EPA METHOD
Endrin[7]	.1	608
Endrin aldehyde[7]	.1	608
Heptachlor[7]	.05	608
Heptachlor epoxide[7] (BHC-hexachlorocyclohexane)	.1	608
PCB-1242[7]	1.0	608
PCB-1254	1.0	608
PCB-1221	1.0	608
PCB-1232	1.0	608
PCB-1248	1.0	608
PCB-1260	1.0	608
PCB-1016	1.0	608
Toxaphene[7]	5.0	608

[1] Based on Contract Required Detection level(CRDL) developed pursuant to 40 CFR Part 300.430(b)(8)
[2] Method 213.2, 239.2, 220.2, 272.2
[3] Dioxin National Strategy
[4] No CRQL(Contract required Quantification Level developed pursuant to 40 CFR Part 300.430(b)(8)) established
[5] CRQL basis, equivalent to ML
[6] ML basis, higher than CRQL
[7] CRQL basis, no ML established
[8] CRQL basis, higher than ML
[9] Based on 3.3 times IDL published in 40 CFR 136, Appendix C

MONITORING RESULTS [1] FOR THE ANNUAL PRETREATMENT REPORT, REPORTING YEAR: _____ , 20____ TO _____ , 20____
TREATMENT PLANT:_____ NPDES PERMIT NO. _____

POLLUTANT	MAHL, if applicable, in μg/L [2]	Influent Values (in μg/L) on Dates Sampled				Daily Average Effluent Limit in μg/L [3]	Effluent Values (in μg/L) on Dates Sampled			
Antimony (Total)										
Arsenic (Total)										
Beryllium (Total)										
Cadmium (Total)										
Chromium (Total)										
Copper (Total)										
Lead (Total)										
Mercury (Total)										
Molybdenum (Total)										
Nickel (Total)										
Selenium (Total)										
Silver (Total)										
Thallium (Total)										
Zinc (Total)										
Cyanide (Total)										
4										

1 It is advised that the influent and effluent samples are collected considering flow detention through each treatment plant. Analytical MQLs should be used so that the data can also be used for Local Limits assessment and NPDES application process.

2 Maximum Allowable Headworks Loading (MAHL) limitation converted back to μg/L. Only complete for pollutants that have approved Technically Based Local Limits.

3 Daily average effluent limit in the NPDES permit OR the applicable state Water Quality Standard calculated to an equivalent permit effluent limit.

4 Record the names of the pollutants [40 CFR 122, Appendix D, Table II and/or Table V] detected and the quantity in which they were detected.

E. WHOLE EFFLUENT TOXICITY TESTING (48-HOUR ACUTE NOEC FRESHWATER)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S):	001
REPORTED AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	100%
EFFLUENT DILUTION SERIES (%):	32, 42, 56, 75, 100%
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

Daphnia pulex acute static renewal 48 hour definitive toxicity test using EPA 821 R 02 012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

b. The NOEC (No Observed Lethal Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution.

c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. PERSISTENT LETHALITY

The requirements of this subsection apply only when a toxicity test demon¬strates significant lethal effects at or below the critical dilution. Significant lethal effects are herein defined as a statistically significant difference at the 95% confidence level between the survival of the appropriate test organism in a specified effluent dilution and the control (0% effluent). The purpose of additional tests (also referred to as ‘retests’ or confirmation tests) is to determine the duration of a toxic event. A test that meets all test

acceptability criteria and demonstrates significant toxic effects does not need additional confirmation.

Such testing cannot confirm or disprove a previous test result.

If any valid test demonstrates significant lethal effects to a test species at or below the critical dilution, the frequency of testing for this species is automatically increased to once per quarter with no option for frequency reduction.

a. Part I Testing Frequency Other Than Monthly

i. The permittee shall conduct a total of three (3) additional tests for any species that demonstrates significant lethal effects at or below the critical dilution. The two additional tests shall be conducted monthly during the next three consecutive months. If testing on a quarterly basis, the permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with procedures outlined in Item 4 of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.

ii. If any of the additional tests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section. The permittee shall notify EPA in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may be also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests.

iii. The provisions of Item 2.a are suspended upon submittal of the TRE Action Plan.

b. Part I Testing Frequency of Monthly

The permittee shall initiate the Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section when any two of three consecutive monthly toxicity tests exhibit significant lethal effects at or below the critical dilution. A TRE may also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.

ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: Daphnia pulex survival test; and Fathead minnow survival test.

iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited for: Daphnia pulex survival test; and Fathead minnow survival test.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the Daphnia pulex survival test, the statistical analyses used to determine if there is a statistically significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA 821 R 02 012 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 90% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

c. Dilution Water

i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;

(A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

(B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may

substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

(A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;

(B) the test indicating receiving water toxicity has been carried out to completion (i.e., 48 hours);

(C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and

(D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

i. The permittee shall collect two flow weighted composite samples from the outfall(s) listed at Item 1.a above.

ii. The permittee shall collect a second composite sample for use during the 24 hour renewal of each dilution concentration for both tests. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 4 degrees Centigrade during collection, shipping, and/or storage.

iii. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent composite sample collection duration and the static renewal

protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section.

4. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA 821 R 02 012, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

b. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST Survival results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for EPA review.

c. The permittee shall report the following results of each valid toxicity test on the subsequent monthly DMR for that reporting period in accordance with PART III.D.4 of this permit. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.

i. Pimephales promelas (Fathead minnow)

(A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM6C.

(B) Report the NOEC value for survival, Parameter No. TOM6C.

(C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM6C.

ii. Daphnia pulex

(A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D

(B) Report the NOEC value for survival, Parameter No. TOM3D.

(C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.

d. Enter the following codes on the DMR for retests only:

i. For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

ii. For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

5. TOXICITY REDUCTION EVALUATION (TRE)

a. Within ninety (90) days of confirming lethality in the retests, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The TRE Action Plan shall lead to the successful elimination of effluent toxicity at the critical dilution and include the following:

i. Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA 600/6 91/003) or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/60¬0/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600¬/R-92/081), as appropriate.

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (703) 487 4650, or by writing:

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

ii. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 24 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;

iii. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and

iv. Project Organization (e.g., project staff, project manager, consulting services, etc.).

b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.

c. The permittee shall submit a quarterly TRE Activities Report, with the Discharge Monitoring Report in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:

i. any data and/or substantiating documentation which identifies the pollutant(s) and¬/or source(s) of effluent toxicity;

ii. any studies/evaluations and results on the tractability of the facility's effluent toxicity; and

iii. any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution.

A copy of the TRE Activities Report shall also be submitted to the state agency.

d. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty eight (28) months from confirming lethality in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the state agency.

e. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).

6. MONITORING FREQUENCY REDUCTION

a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters of testing for one or both test species, with no lethal effects demonstrated at or below the critical dilution. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the Fathead minnow) and not less than twice per year for the more sensitive test species (usually the Daphnia pulex).

b. CERTIFICATION - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in item 3.a. above. In addition the permittee must provide a list with each test performed including test initiation date, species, NOECs for lethal effects and the maximum coefficient of variation for the controls. Upon review and acceptance of this information the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency=s Permit Compliance System section to update the permit reporting requirements.

c. SURVIVAL FAILURES - If any test fails the survival endpoint at any time during the life of this permit, three monthly retests are required and the monitoring frequency for the affected test species shall be increased to once per quarter until the permit is re-issued. Monthly retesting is not required if the permittee is performing a TRE.

d. This monitoring frequency reduction applies only until the expiration date of this permit, at which time the monitoring frequency for both test species reverts to once per quarter until the permit is re-issued.